
SYNOPSIS:

You may think that the little critters you see crawling along the ground or buzzing overhead are nothing but simple bugs. A closer look at their lives will reveal that insects and spiders have many interesting and unusual ways of finding food, laying eggs, building homes, and protecting themselves.

This program examines the fascinating worlds of small insects and spiders to see just how resourceful and clever they are and illustrates how insects and spiders perform tasks in their daily lives that we never think about. For example, since insects and spiders are relatively small, they are constantly surrounded by dust, fungi, and other harmful elements. In order to stay healthy and clean in their environment, they clean themselves quite frequently.

CURRICULUM UNITS:

Arachnology
Ecology
Entomology
Zoology

CAREER OPPORTUNITIES:

Arachnologist
Botanist
Ecologist
Environmental Scientist
Entomologist
Zoologist

BACKGROUND INFORMATION**& PROGRAM OVERVIEW:**

Scientists have already discovered about one million different kinds of insects. but there may be as many as ten times that amount, which have not yet been identified. This program shows students how insects and spiders spend their lives finding food. laying eggs, building their homes, and protecting themselves. The fascinating thing is that insects and spiders perform these activities in unique ways. Most people think that spiders are insects. In this issue, we will show the differences between the two.

Insects hide from their enemies, like most animals. Using numerous types of camouflage, we'll see a katydid that looks like a leaf and a caterpillar that looks like a scary monster; some beetles defend themselves from their enemies by emitting a cloud of smelly gas, while Australian weaver ants squirt a toxic acid at their enemies.

The program explains the difference between insects and spiders that look and behave like their parents when they are born, and those that mature by going through a series of changes that convert them into adults. Students see how an insect changes from an egg, to a larva, to a pup, and finally to an adult.

ISSUES AND CRITICAL THINKING:

- 1) After showing the program, ask the class the following:
 - a) How do insects differ from spiders?
 - b) What is the most common way that insects hide from their enemies?
 - c) What are the four stages of complete metamorphosis?

- 2) Show students a picture of a spider and ask them to count the number of body parts and legs. Then show them a picture of an insect and ask them to do the same. Have the students make a chart on the blackboard or on a sheet of paper, comparing the information side by side.

- 3) Ask the students to select an insect that develops during complete metamorphosis and draw what it looks like during each of the four stages.

GLOSSARY:

Arachnology- The study of spiders.

Camouflage- All appearance that enable an organism to blend into its environment.

Colony- A group of the same animals that live and work together for the good of the group.

Entomology- The study of insects.

Exoskeleton- The tough external supporting structure that covers and protects an insect's muscles and organs.

Larva- The worm-like form which an insect takes as one stage of metamorphosis.

Metamorphosis- The series of changes that insects go through as they develop into their adult stage.

Pollinate- To transfer pollen from one plant to another or within the plant.

**Wonders of Biology – Animals,
Insects, Plants & Fungi**



Show Me Science

K4501DVD

**BIOLOGY: MINI WORLD
OF INSECTS & SPIDERS**



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